attenuate the received audio data based on audio decay characteristics to simulate a distance between the source audio client and a target audio client; and

deliver the attenuated audio data to the target audio client.--

REMARKS

In view of the foregoing amendments and the following remarks, reconsideration and allowance of this application are requested. The Examiner's indication that claims 7, 8, 17, 24, and 25 recite allowable subject matter is acknowledged with appreciation.

Claims 1, 3-9, 11-18 and 20-44 are now pending with claims 1, 9, 18, 26, and 44 being independent. Claims 1, 9, and 18 have been amended and claims 26-44 are newly presented for consideration. Claims 2, 10, and 19 have been cancelled without prejudice or disclaimer.

Support for new claims 26-44 can be found in the specification, drawings, and the other claims at least at the following locations:

Claim 26:	Figures 9A and 9B; Claims 1 and 9; page 3, lines 3-6, line 10, and lines 13-15; page 6, line 26 - page 7, line 1; and page 19, line 18 - page 20, line 7.
Claims 27-29:	Figure 8; page 6, line 26 - page 7, line 1; and page 17, line 23 - page 18, line 15.

Claim 30: Figure 1 and page 6, lines 7-10.

Claims 31 and 32: Figure 1; page 3, lines 6-9; page 6, lines 11-12 and line 26 - page 7, line 1; and page 17, lines 16-27.

Claims 33-36: Figure 1; page 3, lines 6-9; page 6, lines 13-17, and line 26 - page 7, line 1; and page 17, lines 16-27.

Claim 37: Figure 1; Claim 1; page 3, lines 3-6; and page 5, line 24 - page 6, line 6.

Claim 38: Claim 1; page 3, lines 3-6; page 11, lines 20-25; and page 20, lines 16-23.

Claims 39 and 40: Figure 7; Claim 7; page 16, line 18 - page 17, line 16; and page 20, lines 4-7.

Claims 41 and 42: Figures 8, 9A and 9B; Claim 7; page 17, line 19 - page 18, line 8; and page 20, lines 5-10.

Claim 43: Figure 9B: Claim 7; page 18, line 16 - page 19, line 5; and page 20, lines 10-11.

Claim 44: Figures 1 and 2; Claim 18; and page 10, line 1 - page 11, line 9.

For the reasons noted at pages 2-7 in the office action, claims 1-6, 9-16, and 18-23 stand rejected under 35 USC 103(a) as being unpatentable over various combinations of Bruno et al. (U.S. Patent No. 5,710,591), Braun (U.S. Patent No. 4,360,827), Helf et al. (U.S. Patent No. 5,550,924), and Chau et al. (U.S. Patent No. 5,764,750). These rejections are traversed.

As presented, independent claim 1 recites an audio conference server for enabling an application program to provide

multi-point, weight controllable audio conferencing. The server includes a means for managing at least one audio conference which comprises a plurality of audio clients, a means for receiving audio data from the plurality of audio clients, and a means for mixing the audio data to provide spatialized audio to the plurality of audio clients in at least one audio conference. The mixing means results in mixed audio data. Also included is a means for delivering the mixed audio data to the plurality of audio clients in at least one audio conference. Claim 1 has been amended to recite that the mixing means includes a means for providing distance-based attenuation according to sound decay characteristics.

The cited art -- whether taken alone or in combination -- fails to describe or suggest the combination of features recited in claim 1.

Bruno relates to a multimedia conferencing in which two or more users can interact with each other. See Bruno at col. 1, lines 6-27. Specifically, Bruno provides an apparatus that records and indexes participants in the conference. See Bruno at col. 3, lines 19-26. Furthermore, Bruno describes a multipoint control unit that switches among terminal devices based on a detected audio signal. See Bruno at col. 3, lines 26-39. However, Bruno fails to describe or suggest a weight controllable audio conferencing server as recited in claim 1 in which audio

data is mixed by providing distance-based attenuation according to sound decay characteristics.

Braun et al. fails to cure the deficiencies of Bruno. Braun et al. relates to an interactive teleconferencing and a system for an interactive audio and video conference. See Braun at col. 1, lines 5-7 and col. 1, line 64 - col. 2, line 13. Furthermore, Braun et al. describes a system that coordinates timing of audio and video signals in a conference to provide a "natural" presentation. See Braun at col. 4, lines 12-41. However, Braun et al. fails to describe or suggest a weight controllable audio conferencing server as recited in claim 1 in which audio data is mixed by providing distance-based attenuation according to sound decay characteristics.

Helf et al. fails to cure the deficiencies of Bruno and Braun et al. Helf et al. relates to noise attenuation in communication channels. See Helf at col. 1, lines 9-34. As with Bruno and Braun, Helf fails to describe or suggest a weight controllable audio conferencing server as recited in claim 1 in which audio data is mixed by providing distance-based attenuation according to sound decay characteristics. Rather, Helf describes attenuation of narrow frequency band components associated with noise. See Helf at col. 5, lines 26-46. Helf's attenuation is <u>not</u> distance-based and does <u>not</u> depend on sound decay characteristics. To the contrary, the attenuation of a sound in Helf's system depends on a frequency component of the sound,

since noise may be distinguished from other sounds by a shape of its frequency spectrum. See Helf at col. 4, lines 16-49.

These differences from the cited art provide the server of claim 1 with several advantages. For example, as described in the specification at page 6, line 26 - page 7, line 7, the server of claim 1 provides a user with realistic sound that varies with an apparent distance between that user's persona and either another user's persona or a sound in a scene.

Thus, the theoretical combination of Bruno, Braun, and Helf fails to describe or suggest the combination of features recited in independent claim 1. For these reasons, applicant requests withdrawal of the rejection of claim 1.

Claim 9 recites a method for enabling an audio conference server (ACS) to provide weight controllable audio conferencing. The method includes receiving audio data from audio clients, mixing the audio data to provide spatialized audio to the audio clients, and delivering the mixed audio data to the audio clients. Claim 9 has been amended to recite that the mixing includes providing distance-based attenuation according to sound decay characteristics. For reasons discussed above with respect to claim 1, any theoretical combination of Bruno, Braun, and Helf fails to describe or suggest the combination of features recited in independent claim 9. For these reasons, applicant requests withdrawal of the rejected claim 9.

Claim 18 recites a computer program for enabling an audio conference server (ACS) to provide weight controllable audio conferencing. Claim 18 has been amended to recite that the mixing means includes a means for enabling the computer to provide distance-based attenuation according to sound decay characteristics. For reasons discussed above with respect to claim 1, any theoretical combination of Bruno, Braun, and Helf fails to describe or suggest the combination of features recited in independent claim 18. Accordingly, applicant requests withdrawal of the rejected claim 18.

New independent claim 26 recites an audio conferencing method that includes receiving audio data from a source audio client, attenuating the received audio data based on audio decay characteristics to simulate a distance between the source audio client and a target audio client, and delivering the attenuated audio data to the target audio client. For reasons discussed above with respect to claim 1, none of Bruno, Braun, and Helf describes or suggests the combination of features recited in independent claim 26. For at least these reasons, claim 26 is allowable.

New independent claim 44 recites computer software for an audio conference.server. The software comprises instructions for causing a computer processor to receive audio data from a source audio client, attenuate the received audio data based on audio decay characteristics to simulate a distance between the

source audio client and a target audio client, and deliver the attenuated audio data to the target audio client. For reasons discussed above with respect to claim 1, none of Bruno, Braun, and Helf describes or suggests the combination of features recited in independent claim 44. Accordingly, claim 44 is allowable over the art of record.

The remaining claims -- claims 3-6, 11-16, 20-23, and 27-43 -- each depend from one of the independent claims discussed above. Accordingly, the dependent claims are allowable for the reasons set forth with respect to their respective independent claims, and for containing allowable subject matter in their own right. Independent consideration and allowance of the dependent claims are requested.

In view of the foregoing amendments and remarks, this application is in condition for allowance, and a notice thereof is requested.

Respectfully submitted,

Date: February 25, 1999

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